

Coastal Resilient Communities Workshop



Livelihoods Vulnerability, Coping and Resilience: Experiences from Coastal Zone of Bangladesh

Presented by

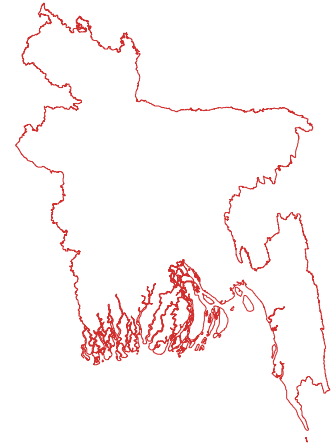
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PI-ADPC, IOTWS

Bangkok, Thailand. May, 2006.

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Technical Case Study



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ASIA

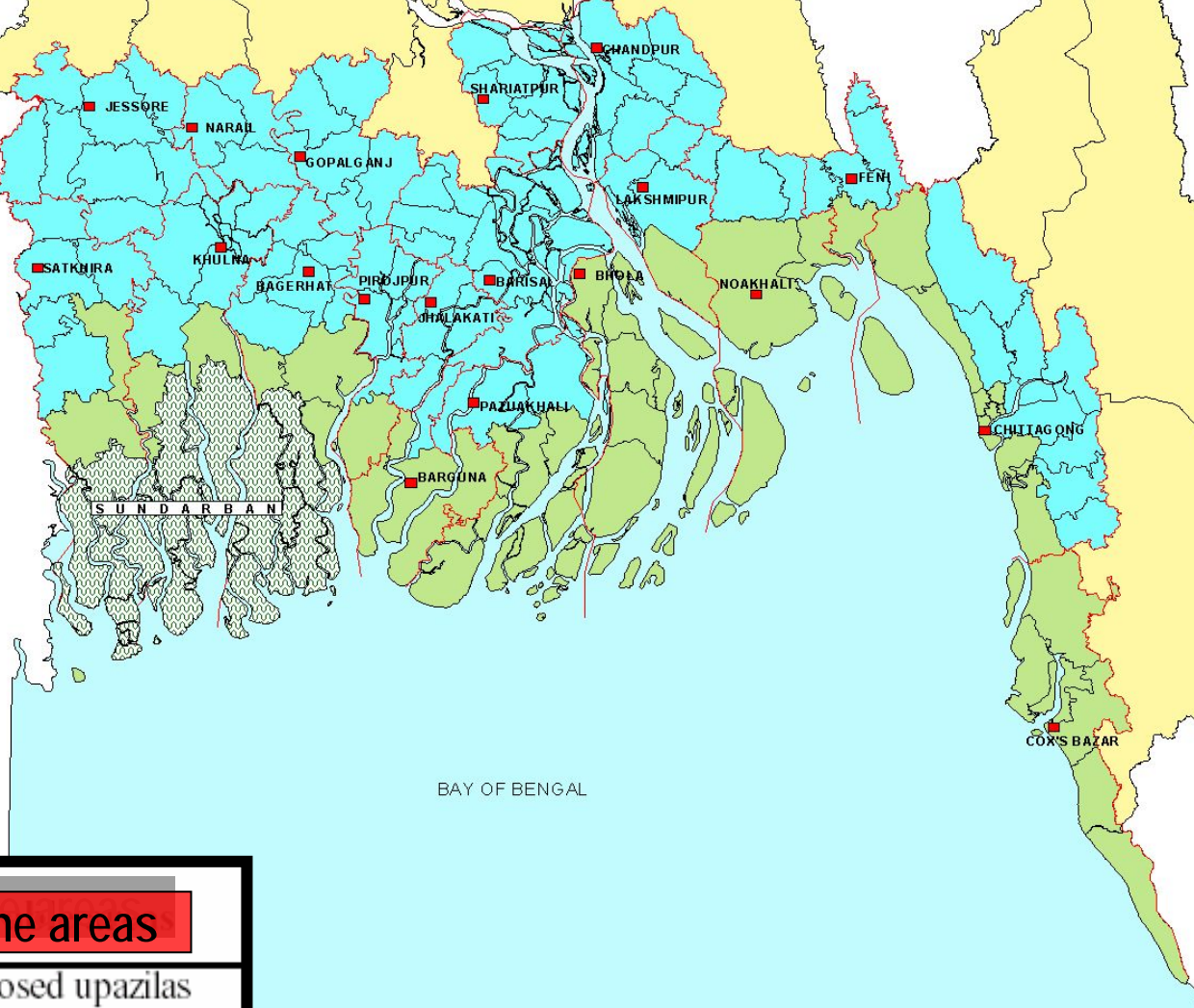


Location of Bangladesh



19 districts of BGD coast (exposed & non-exposed)

COASTAL ZONE BANGLADESH



Hazards	Prone areas
Cyclone and storm surge	Islands, exposed upazilas
Land erosion	Meghna and other estuaries, islands and coastal rivers
Flood	Exposed upazilas
Drainage congestion	Khulna, Jessore, Noakhali
Salinity intrusion	Western exposed upazilas
Drought	Satkhira
Earthquake	Chittagong

Land area = 47,201 km²
 Population = 36.8 million
 Absolute poverty = 52%
 19 districts and 147 Upazila (sub-districts)



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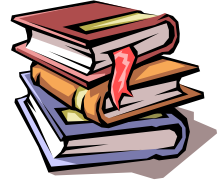


Mixed methodology developed for vulnerability assessment



1

Review of secondary literature and data



2

Mail survey with coastal NGOs



3

Participatory workshops in 19 districts



4

Several case studies



Participatory focused workshops with coastal stakeholders



1

List vulnerability factors by livelihood group

2

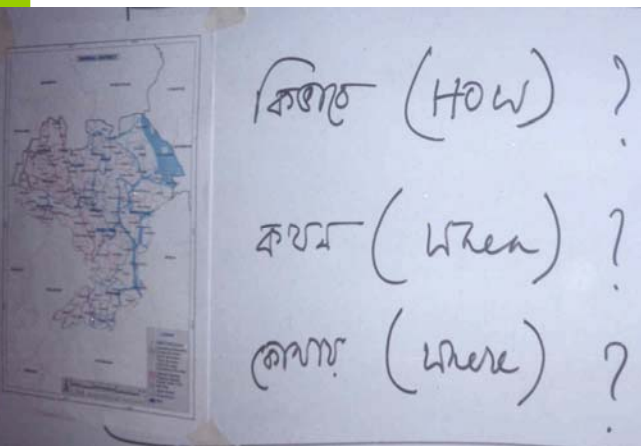
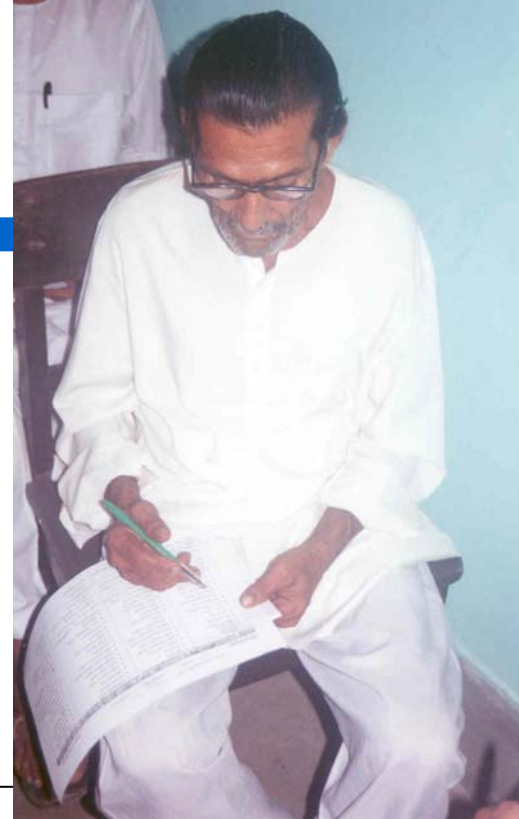
Respondents select 5 most important

3

Rank according to frequency

4

Info on spatial and temporal distribution, and coping



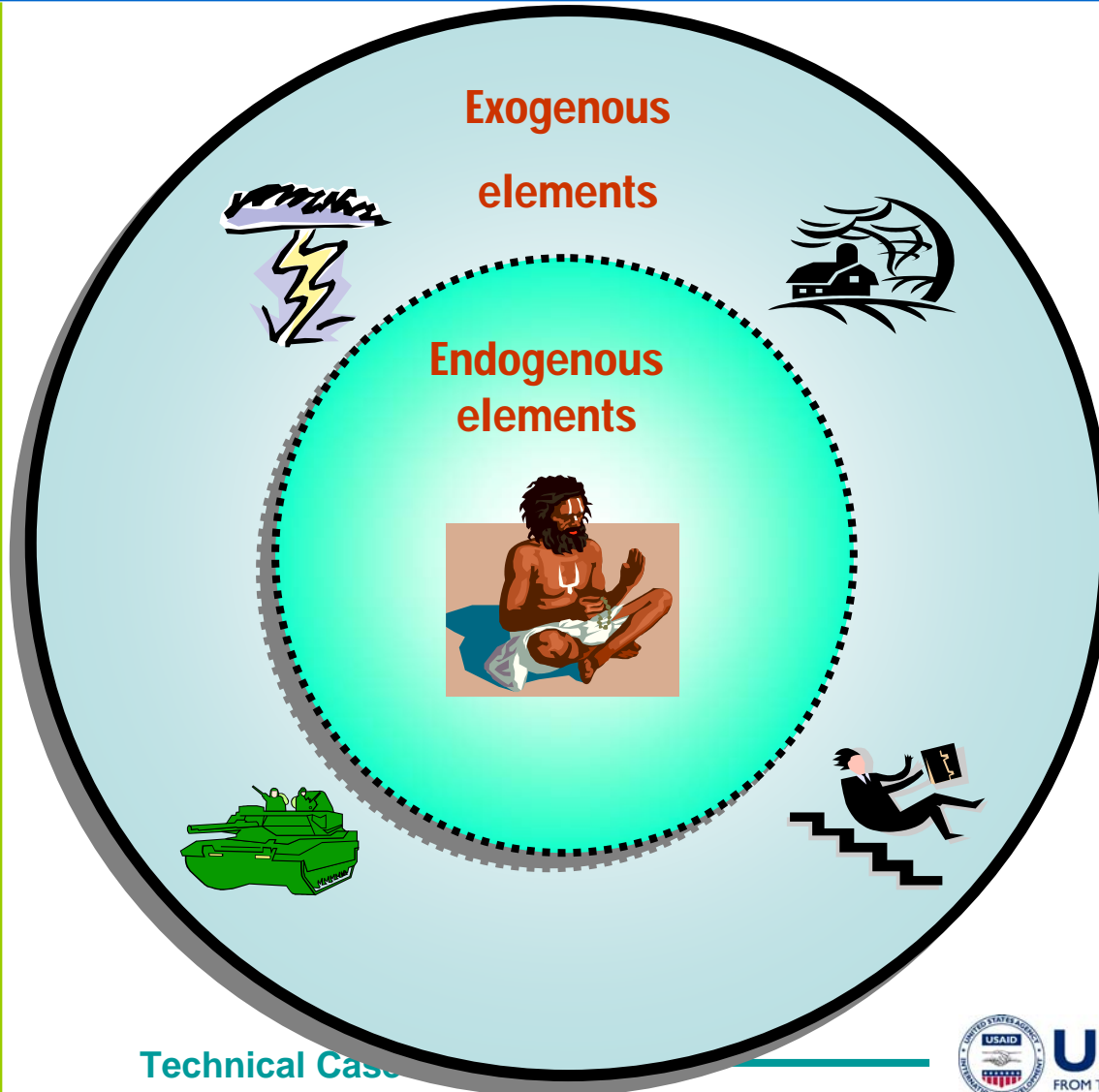
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Vulnerability

$$f(a_{en}, b_{en} \dots n_{en}); (a_{ex}, b_{ex} \dots n_{ex})$$



Exogenous factors

Endogenous factors

Current status

Analysis of Vulnerabilities



161 vulnerability factors >>13 composite vulnerability domains

ENVIRONMENTAL

Water

Disasters

Environment

ECONOMIC

Employment

Productive
activities

Household
assets

Household
finances

SOCIAL

Social issues

Women's
conditions

Illegality

GOVERNANCE

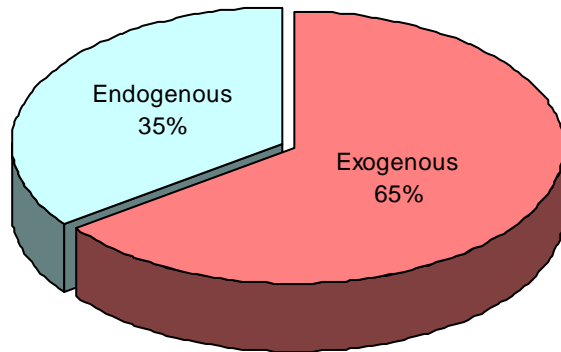
Health and
education

Infrastructure and
services

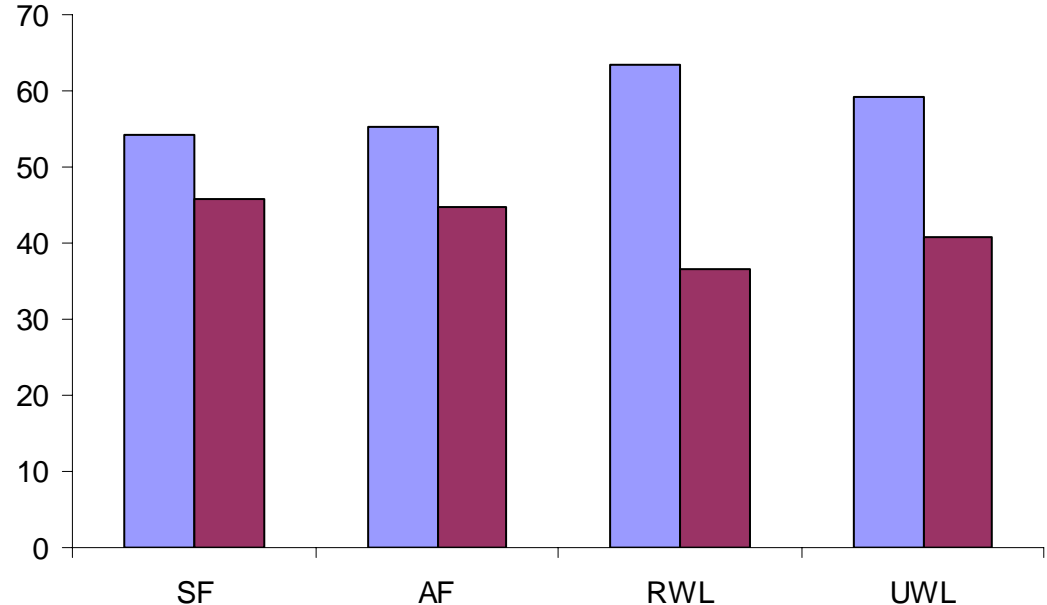
Governance

Nature of vulnerability factors

Overall

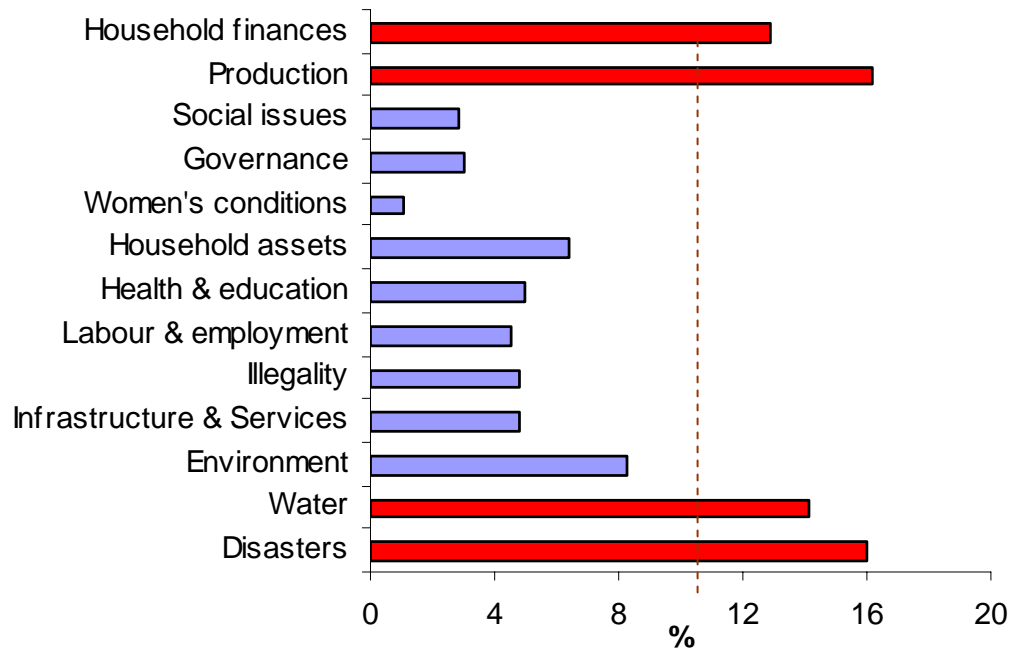


By livelihood groups



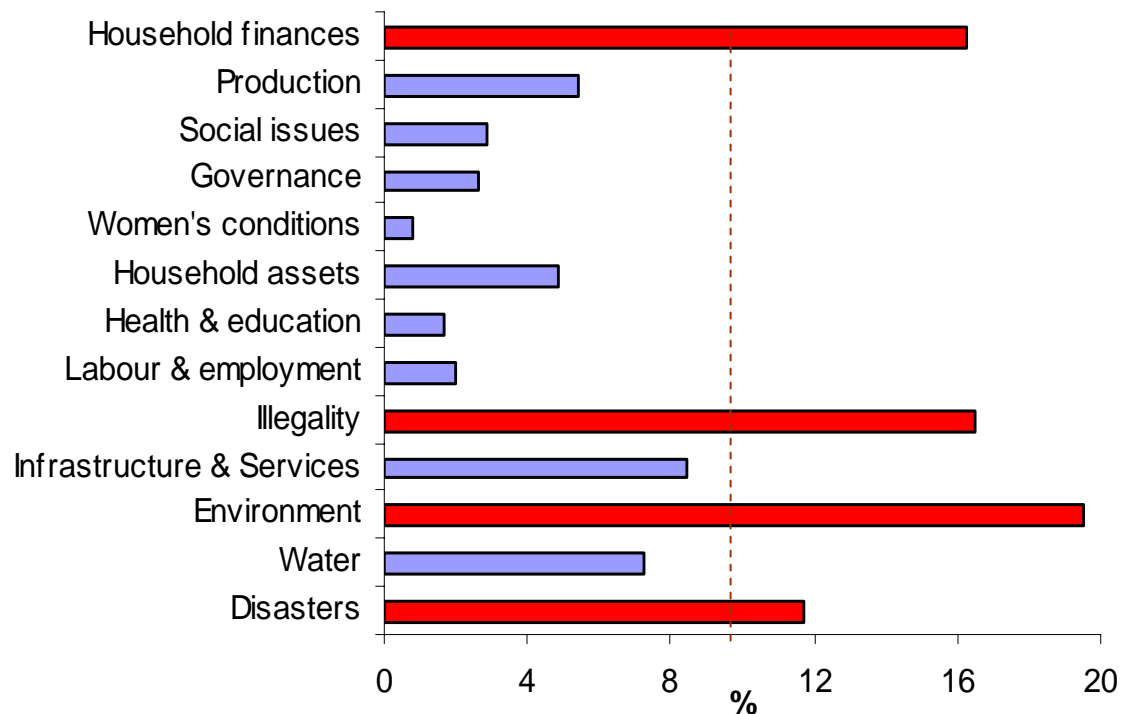
small farmers

Domains

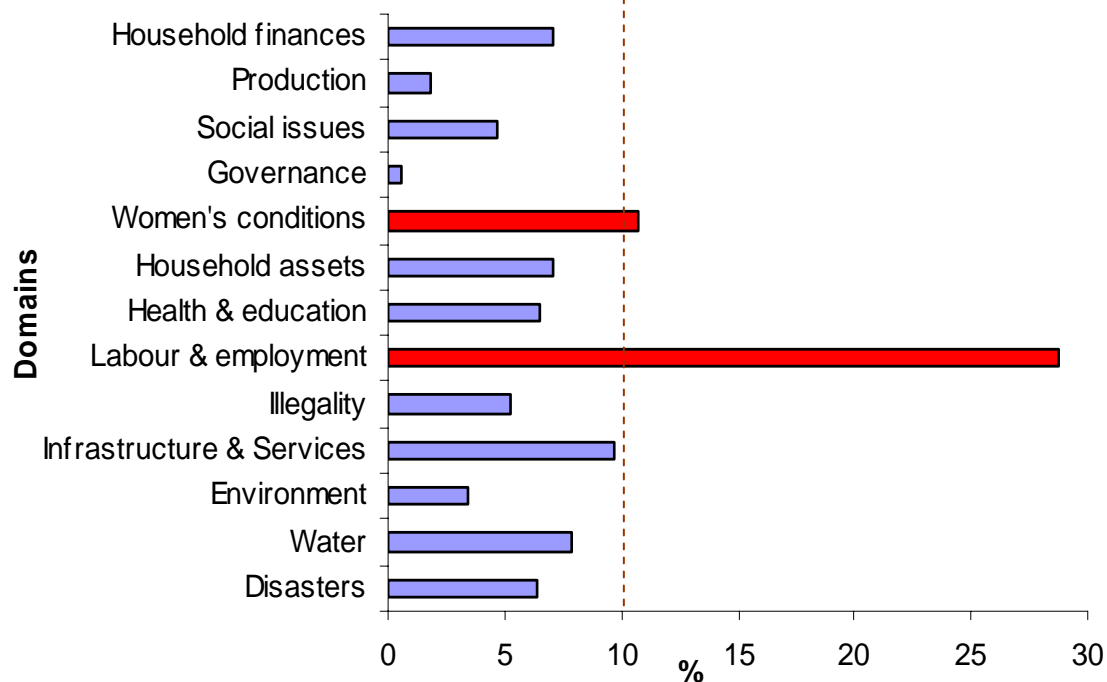


artisanal fishers

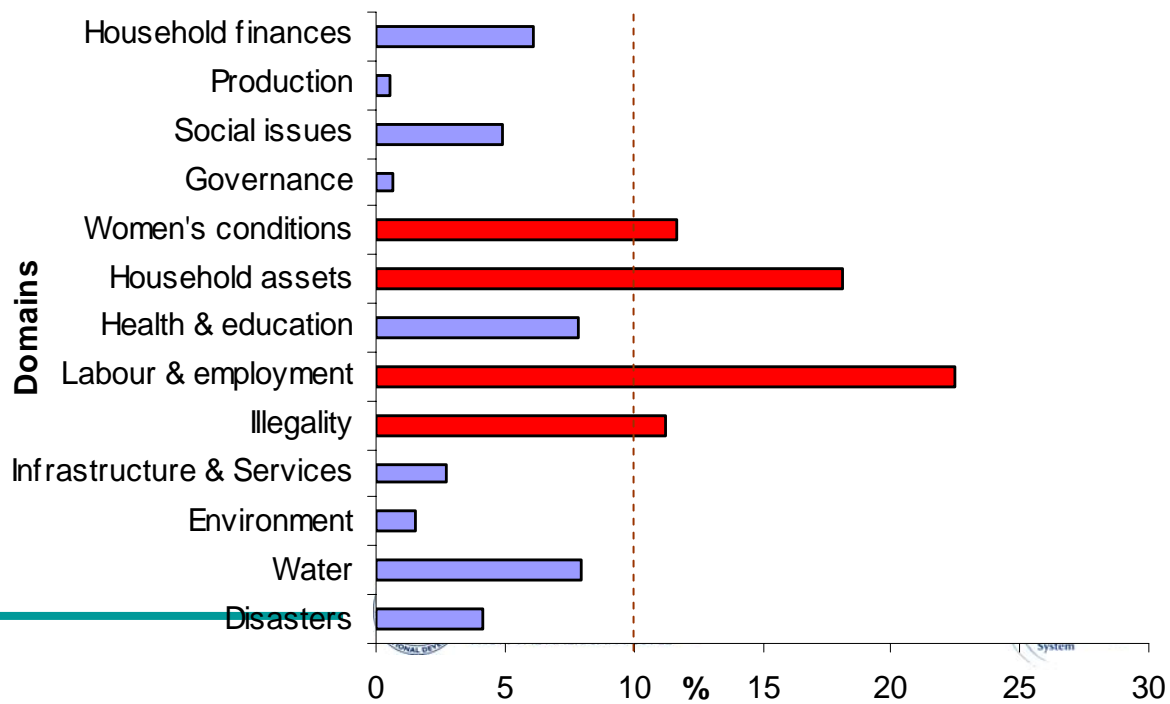
Domains



rural wage laborers



urban wage laborers



Technical Case Study

Deterioration of natural resource base

Loss of biodiversity

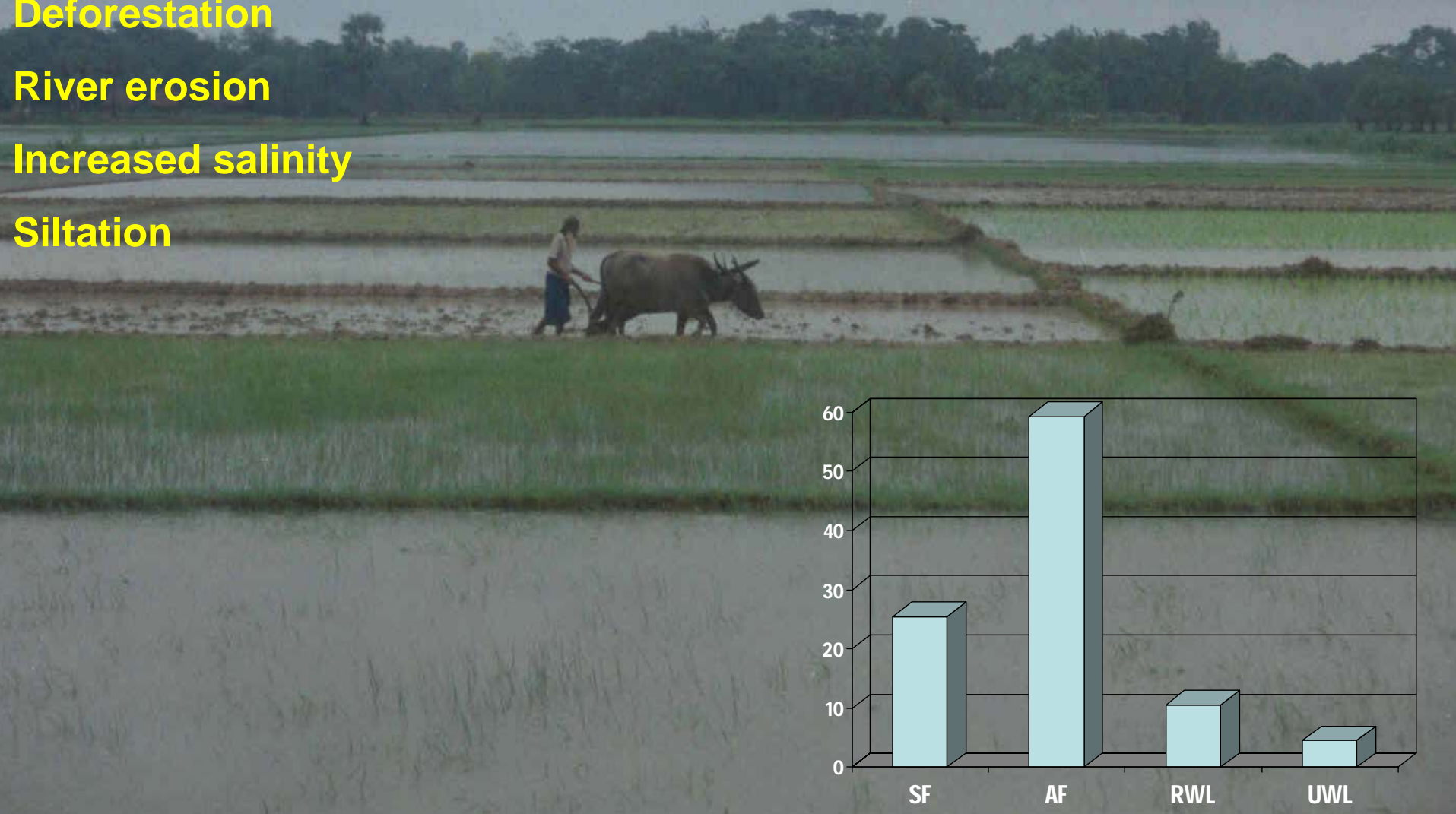
Deforestation

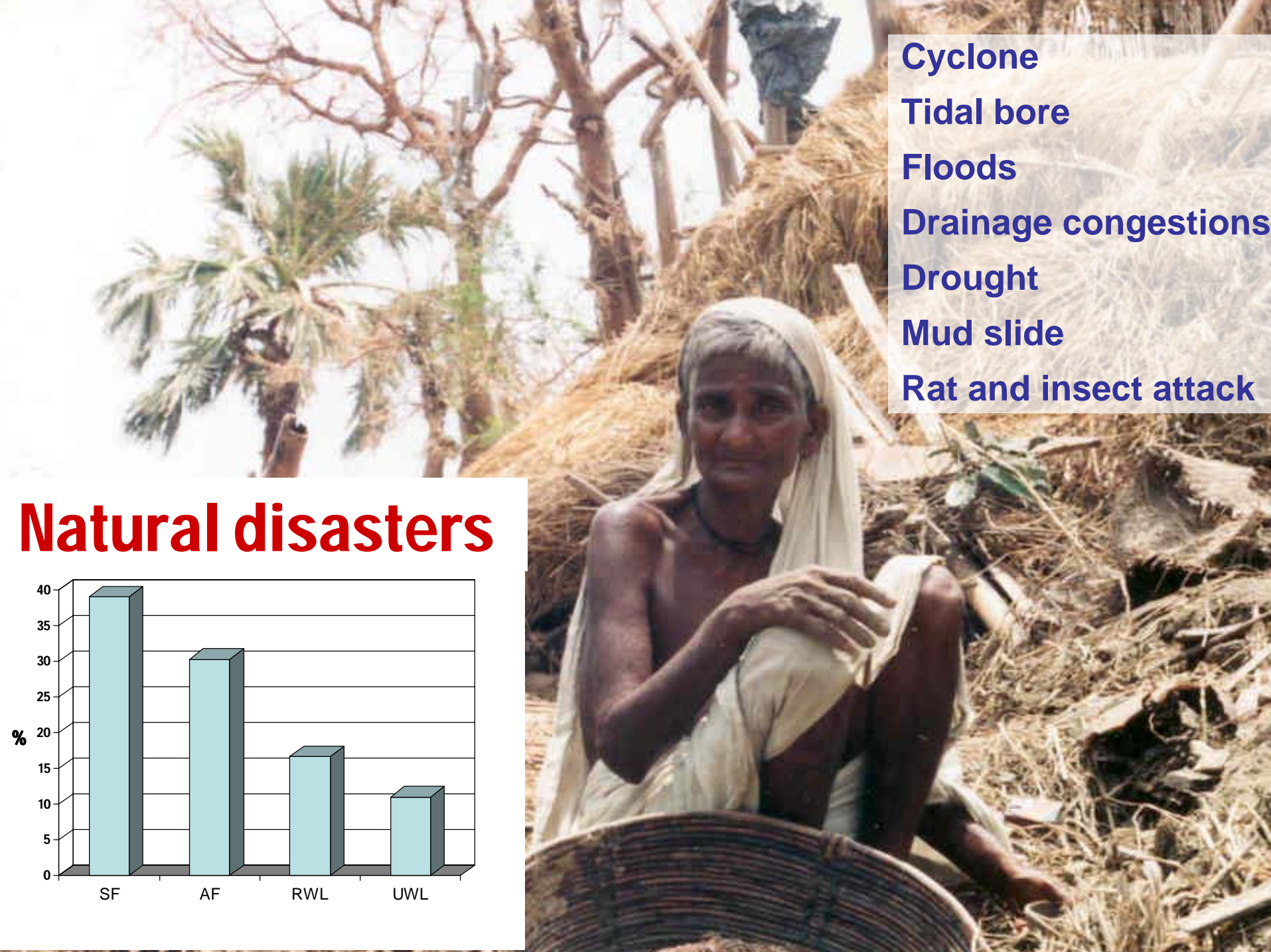
River erosion

Increased salinity

Siltation

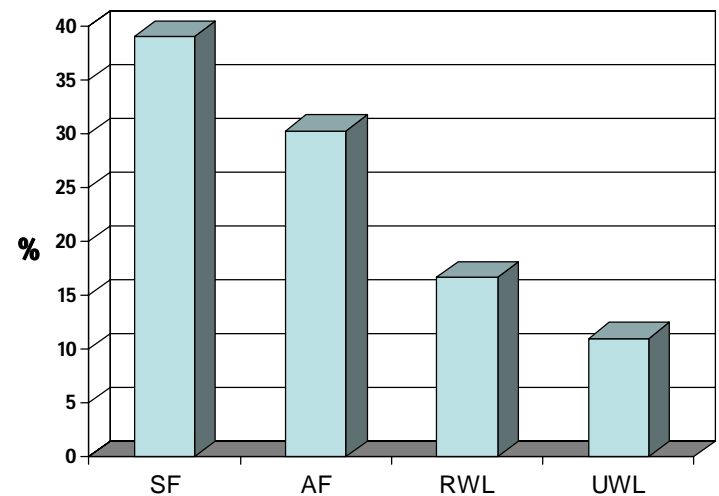
Environment





Cyclone
Tidal bore
Floods
Drainage congestions
Drought
Mud slide
Rat and insect attack

Natural disasters

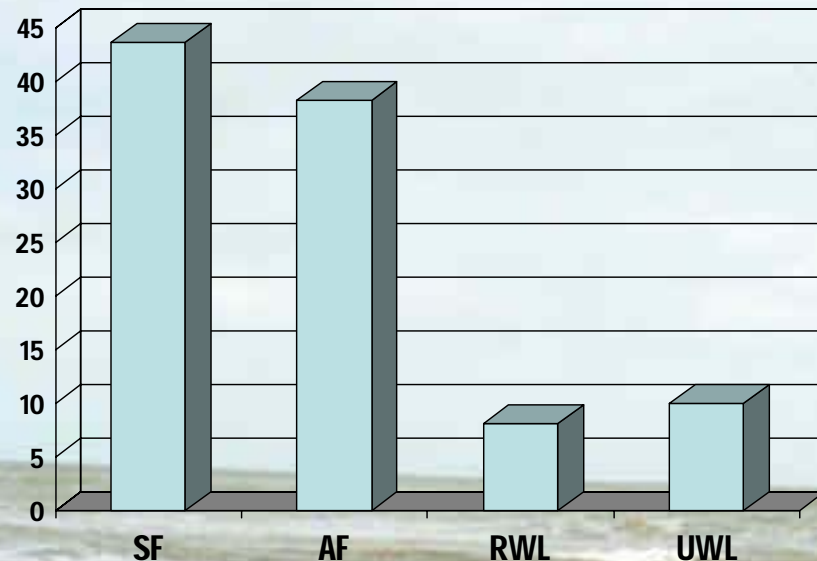


Governance

Complex fishing policy

Leasing of water bodies

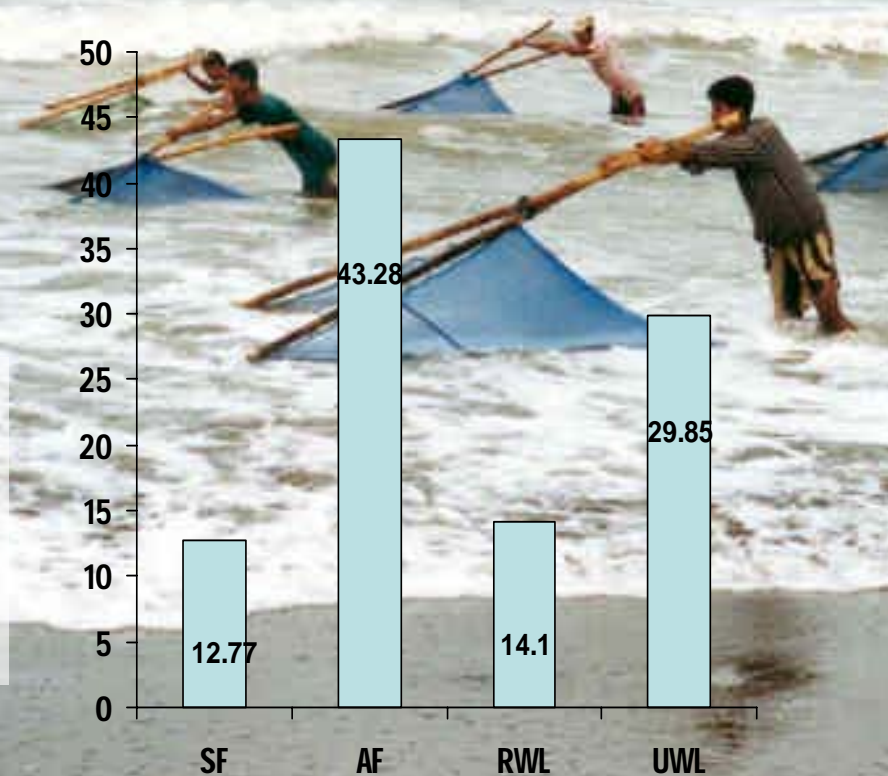
Agricultural subsidies



Illegality

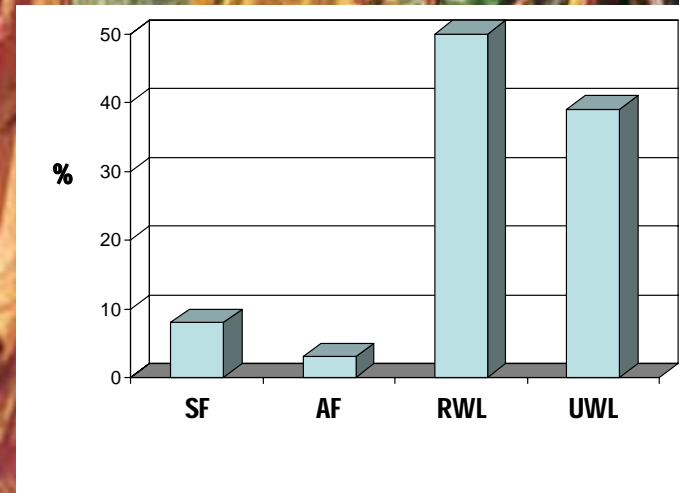
Deteriorating law and order

Impediment to access natural resources

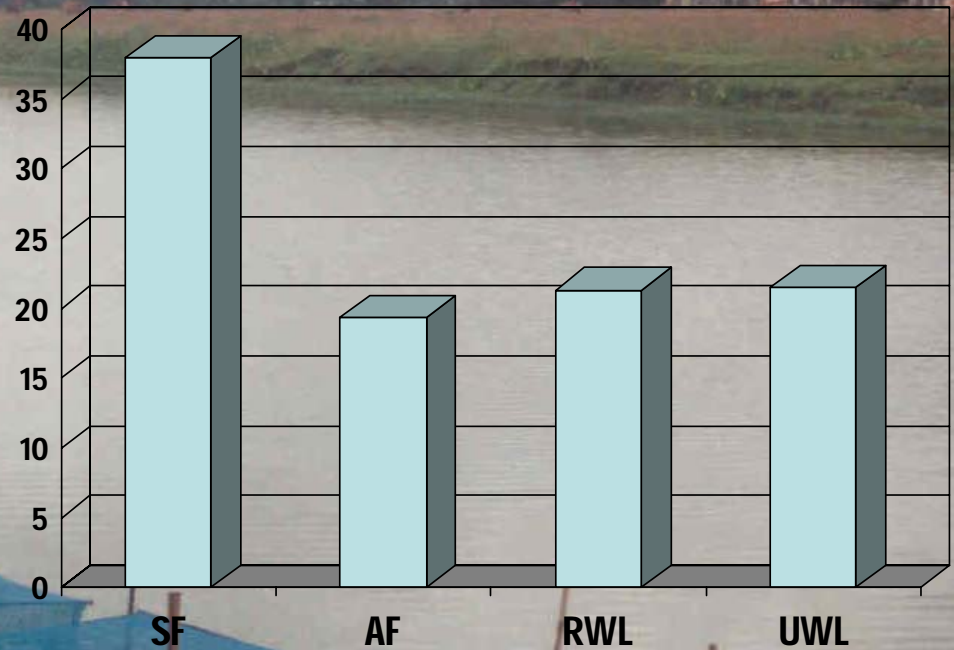


Employment

Lack of employment opportunities
Lack of clear labour policies
Low wage rates
Child labour
Accidents on the job



Water



Lack of safe drinking water

Arsenic

Water conditions

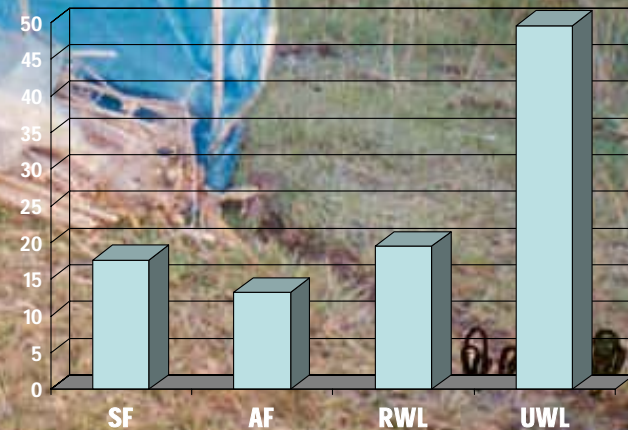
Water management

Household assets

Housing problems

Scarcity of land

Lack of sanitary latrines



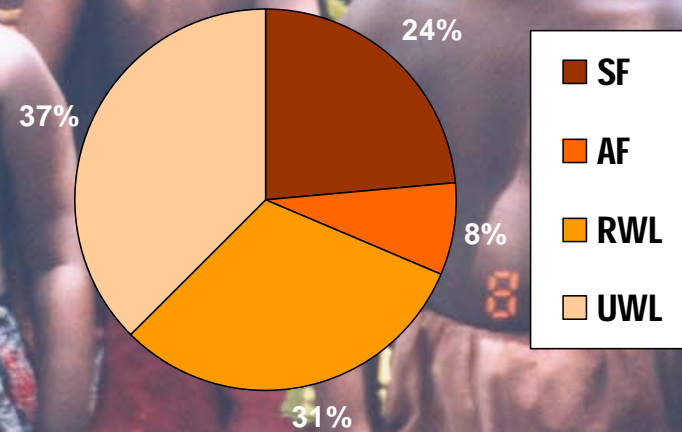
Health and education

Scarcity of educational facilities

Lack of healthcare facilities

Absence emergency healthcare

Female access to healthcare



Social issues

Large family size

Dowry

Polygamy

Social dysfunctions
(e.g. prostitution)

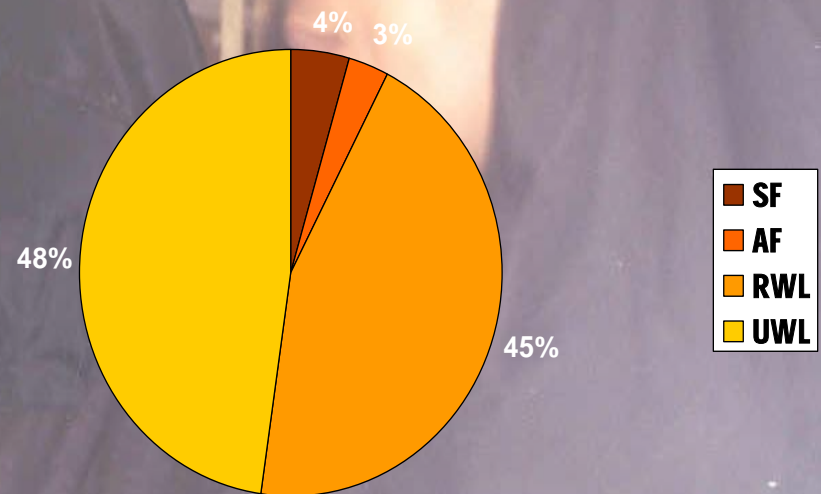
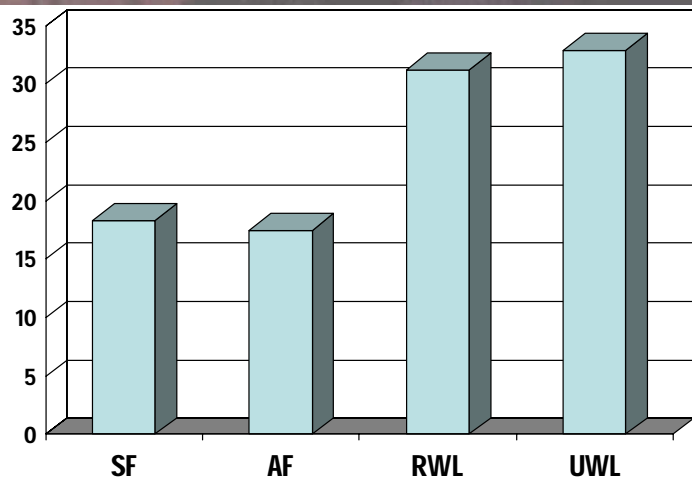
WOMEN'S CONDITIONS

Social constraints of female workers

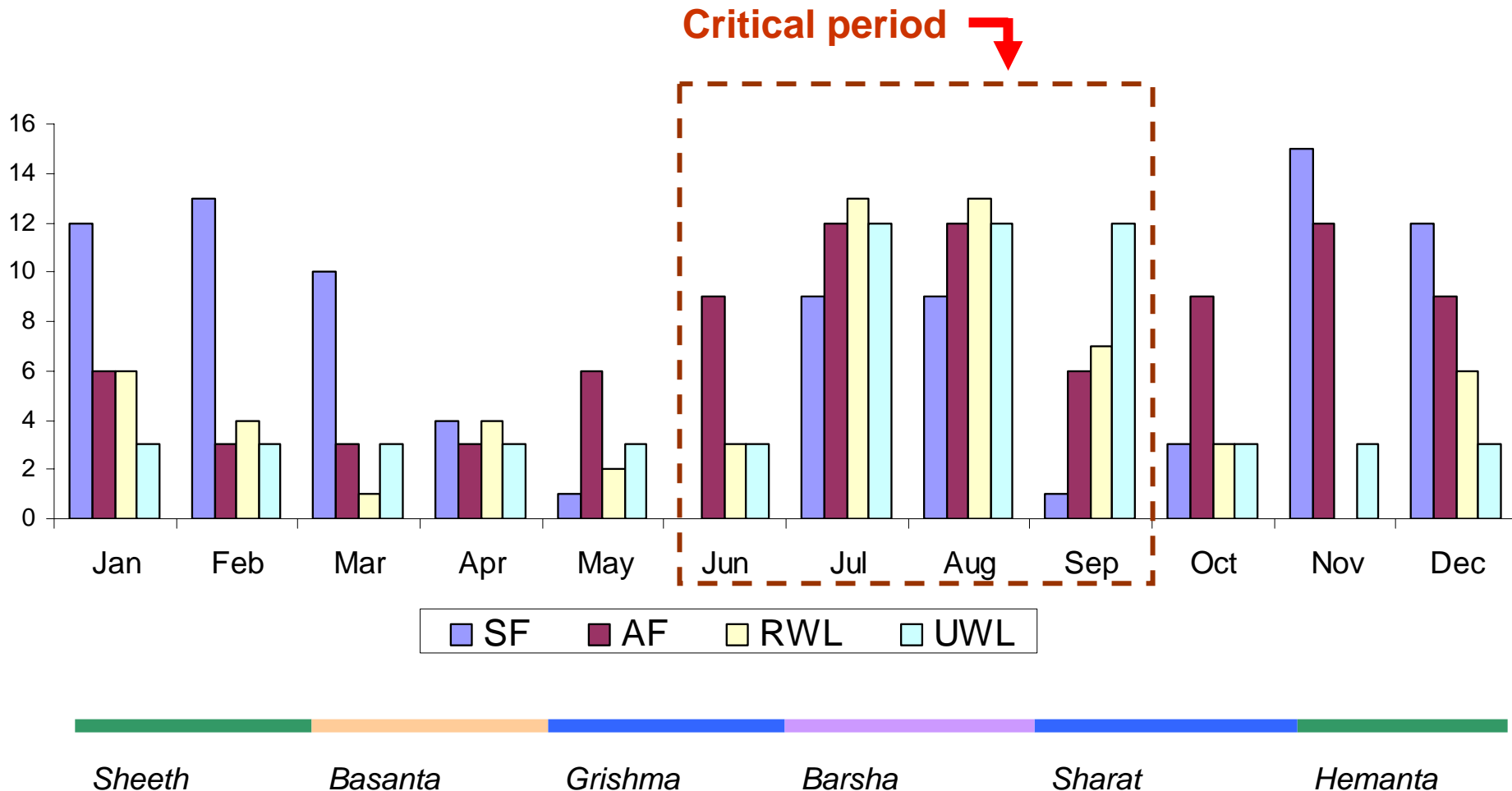
Low female wage rates

Violence

Harassments



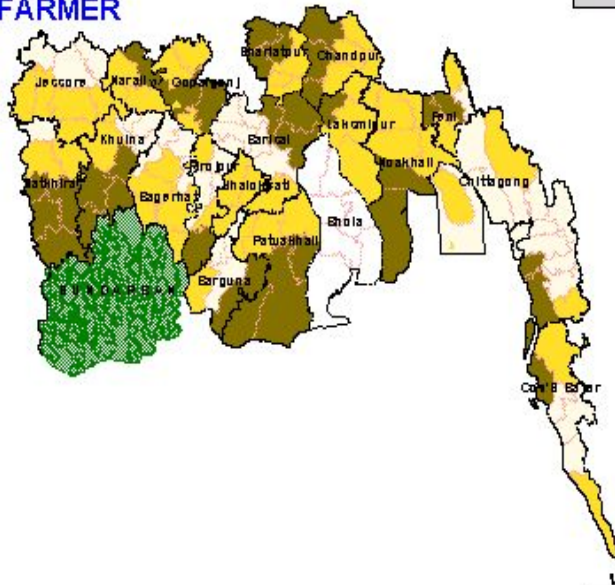
Temporal distribution of lack of cash as vulnerability factor (all groups)



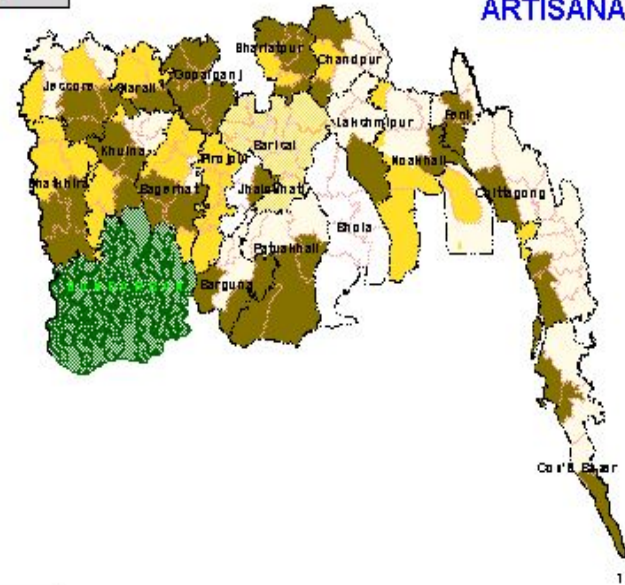
COASTAL REGION

(LIVELIHOOD GROUPS)

SMALL FARMER



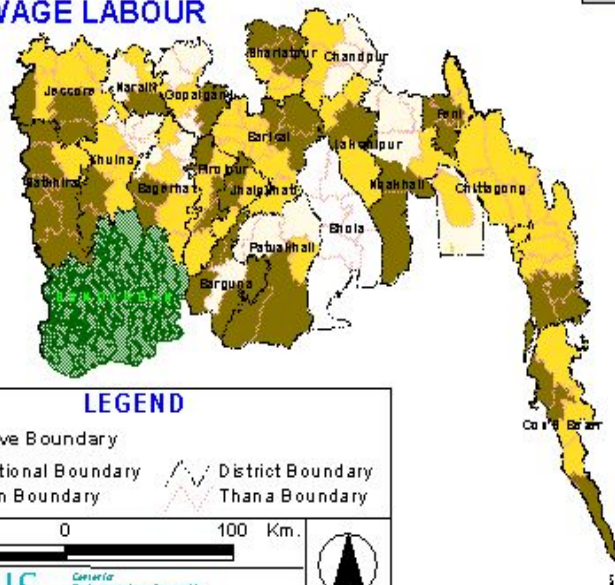
ARTISANAL FISHER



VULNERABILITY

Low Medium High

RURAL WAGE LABOUR



URBAN WAGE LABOUR



LEGEND

Administrative Boundary

International Boundary

Division Boundary

District Boundary

Thana Boundary

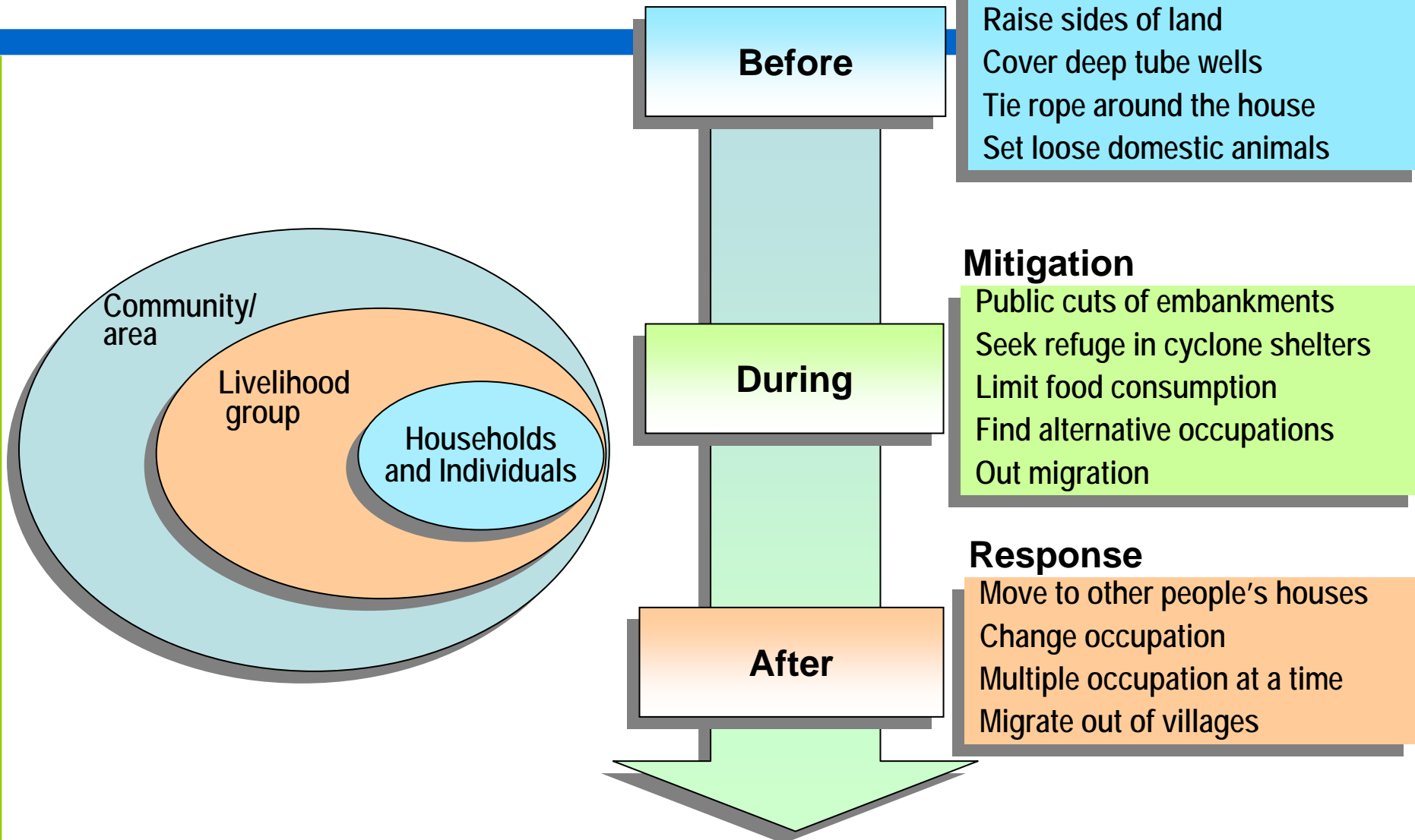
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CEGIS

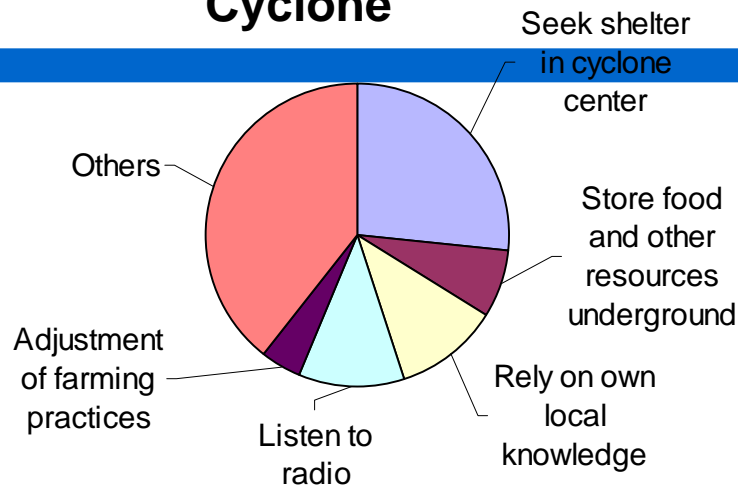
Center for Environmental and Geographic Information Systems

Coping of the livelihood groups

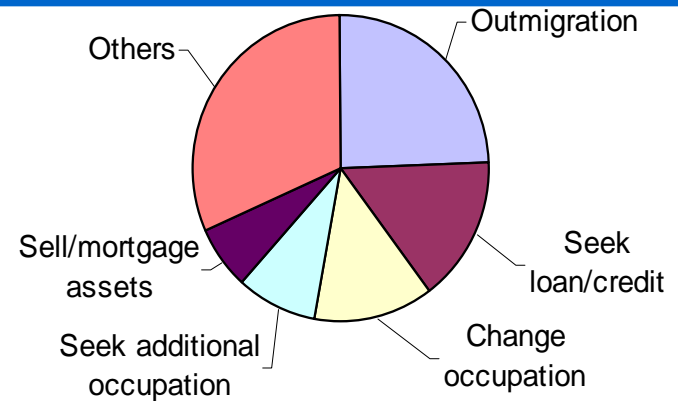


Few examples by VFs

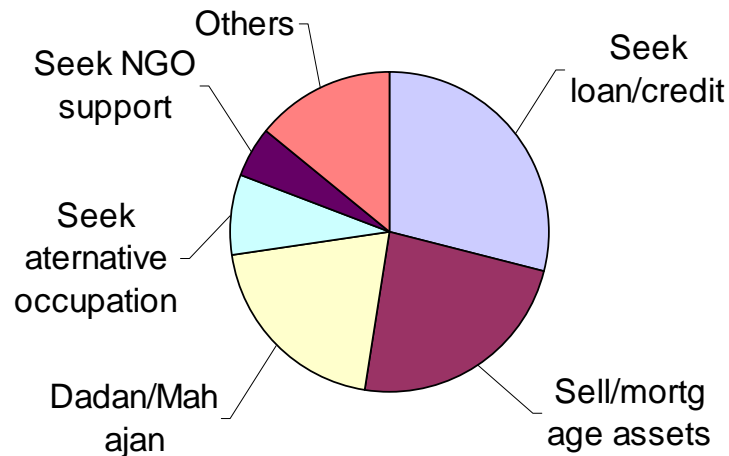
Cyclone



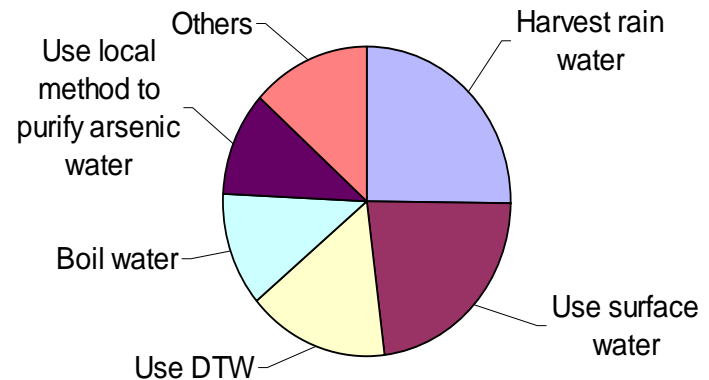
Employment



Lack of cash



Arsenic and contaminated water



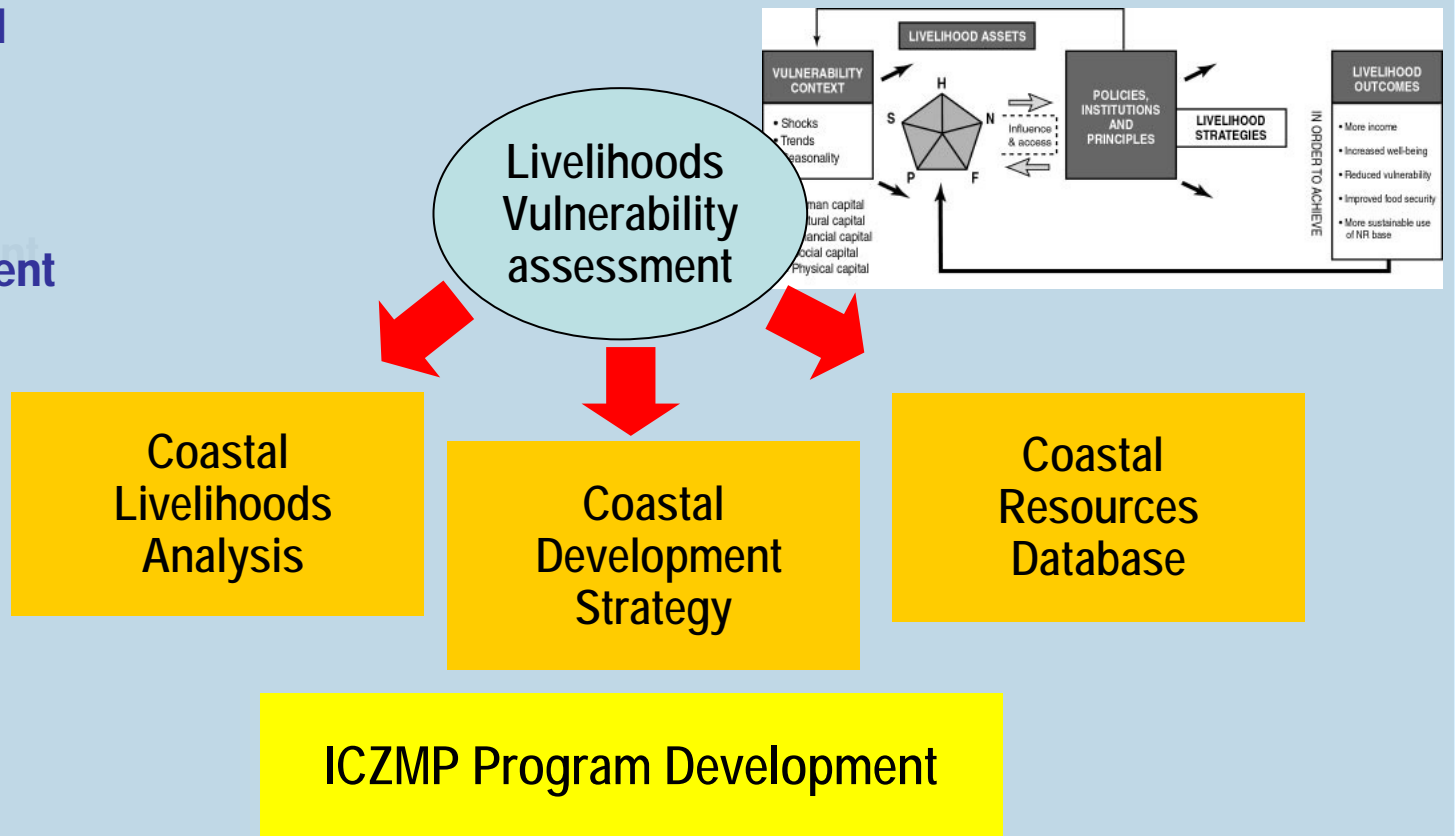
Few “encouraging” elements of resilience (state supported)

- Coastal embankments and polders – to give greater structural security
- Coastal Green Belt Project - for the past 30 years this is operating to develop a greater ecological shields to the coastal shores
- Cyclone Shelters and *killas* - designed for multi-purpose
- Cyclone Preparedness Program (CPP) – for dissemination of early warning and needed institutional network up to village level
- Civil society, NGO and MFIs expansion – growing fast.
- The Sundarban forest (the world heritage site) – natural protection to the southwestern coastal area.

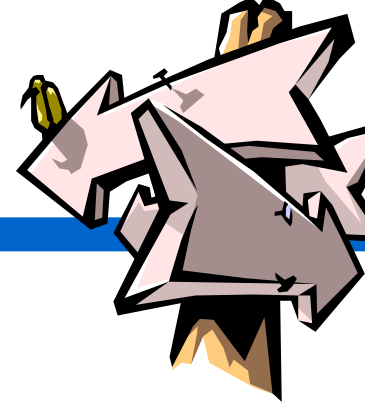


Implications for ICZMP Bangladesh

Integrated Coastal Zone Management



Synergies for IOTWS program



- An in-depth understanding of the **vulnerabilities** existing (factors, temporal and spatial connotations) and **coping strategies** adopted at community level.
- Leads towards finding out **gaps between the livelihood vulnerabilities and overall community resilience** for the community. That is useful for devising community resilience.
- Establish **contacts, networks** and ensure **participation that can lead towards advocacy and awareness** for community resilience.
- The approach can strategically **contribute in overall ICZM framework and Sustainable Development**.
- The methodology is **relatively simple** and can be mainstreamed at national and/or sub-national level for a **continued adaptive learning** which is a major paradigm now for resilience and sustainable development.

Thanks...

